

UNITED STATES PATENT AND TRADEMARK OFFICE

In re Application of: Johannes Reinschke et al  
Application Number: Unassigned  
Filing Date: Concurrently Herewith  
Group Art Unit:  
Examiner:  
Title: LINEAR DRIVE UNIT WITH AN OSCILLATING  
ARMATURE PART AND A SPRING

Commissioner for Patents  
PO Box 1450  
Alexandria, VA 22313-1450

**INFORMATION DISCLOSURE STATEMENT**

Sir:

In accordance with 37 C.F.R. 1.98, I am submitting a completed "INFORMATION DISCLOSURE STATEMENT BY APPLICANTS" (*Form PTO/SB/08A*) with patents and/or publications as delineated therein attached.

DE 198 05 455 discloses that the electromagnetic actuator 1 has a coil 2 coupled to a power supply stage 8 and an armature 4 with an integral pin 5 that is displaced linearly. In addition the unit has a braking action coil 3 coupled to a switch 10. As the armature approaches the pole 12, a voltage is induced that causes the switch to close and full braking current is supplied to the coil to provide braking action

DE 1 143 578 discloses an oscillating armature drive system, specifically for dry shaving appliances, comprising an electromagnet and an armature which oscillates transversely to the pole end faces and is supported at two points in its longitudinal axis by torsion springs, e.g. plate springs, in an arrangement which will permit the oscillation of the armature, such that, in its resting position, the armature is displaced laterally in relation to the pole end faces and, during operation, is drawn by the magnetic force of attraction to a central position in relation to the pole end faces, characterized in that the lower ends (41) of the torsion springs (4), in relation to the top ends (42), are laterally displaced in the same direction in which the armature is moved by the magnet during operation.

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DE 1 043 355 discloses an oscillating compressor, preferably for small refrigerating devices, with an electromagnetic propulsion mechanism in accordance with patent application B38284 Ia/17a, characterized in that the resting position of the armature is displaced in relation to the compressor cylinder and at a sufficient distance from the symmetrical position in relation to the stator pole shoes such that, in the absence of back-pressure or in case of insufficient back-pressure, the armature will only oscillate at the half-wave exciter frequency, and will switch over automatically to a rate of half-cycle oscillation, at higher amplitude, which corresponds to the natural mechanical frequency upon the build-up of a specific back-pressure.

DE 1 488 055 discloses a dry shaving appliance with an electromagnetic oscillating armature drive system for the reciprocal movement of an actuating weight in phase opposition to an oscillating counterweight, characterized in that, by a known arrangement (2, 3, 4), the actuating weight is supported on two parallel plate springs (5), the lower ends of which are secured to a base (6) and the upper ends of which are secured to the actuating weight, such that the stationary element (1) of the oscillating armature drive system is also preferably secured to the base (6), and the counterweight is also supported on two parallel plate springs (7), arranged in parallel to the plate springs (5) for the support of the actuating weight, the lower ends of which are secured to the same base (6) as the actuating weight, such that the counterweight (8) will only be impelled into natural oscillation by resonant interaction with the actuating weight (2, 3, 4).

JP2002-31054 discloses that the linear compressor 10 includes a motor unit 16 having a linear motion part 14 for driving a piston shaft 12 in the axial direction and a cylinder 22 to receive a piston 18 fixed to the shaft 12 outside the motor unit 16 about its axial direction so that a compression chamber 20 is formed, and five ring-shaped leaf springs 58 are installed around the cylinder 22 in such a way as apart at certain intervals in the axial direction, and the inner edges 58a of these leaf springs 58 are screwed fast to a disc part 38a of the linear motion part 14 while their outer edges 58b are fixed to a stationary housing 36 of the motor unit 16.

If no translation of pertinent portions of any foreign language patents or publications mentioned within the "INFORMATION DISCLOSURE STATEMENT BY APPLICANTS"

Receipt date: 08/29/2006

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is included with the aforementioned copies of those applications, patents and/or publications, it is because no existing translation is readily available to the Applicants. As per the Notice in 1273 OG 55 (August 5, 2003) no copies of any above-mentioned US patents and US patent application publications are submitted for this application which was filed after June 30, 2003.

Respectfully submitted



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August 29, 2006

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Approved for use through 07/31/2006. OMB 0651-0031

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*(Use as many sheets as necessary)*

**Complete if Known**

Application Number	Unassigned
Filing Date	Concurrently Herewith
First Named Inventor	Johannes Reinschke et al
Art Unit	2834
Examiner Name	M. Andrews
Attorney Docket Number	2005P00319WOUS

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## U. S. PATENT DOCUMENTS

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## FOREIGN PATENT DOCUMENTS

Examiner Initials*	Cite No. <sup>1</sup>	Foreign Patent Document	Publication Date	Name of Patentee or Applicant of Cited Document	Pages, Columns, Lines, Where Relevant Passages Or Relevant Figures Appear	T <sup>6</sup>
		Country Code <sup>3</sup> *Number <sup>4</sup> *Kind Code <sup>5</sup> (if known)	MM-DD-YYYY			
		DE 198 05 455	09/03/1998	Dr. Martin Pischiner		
		DE 1 143 578	02/14/1963	Dr. Karl-Ernst Rumswinkel		
		DE 1 043 355	11/13/1958	Friedrich Bayer		
		DE 1 488 055	04/10/1969	Wolfram Goebner		
		JP2002-31054	01/31/2002	Hojo Mikio		
		International Search Report PCT?EP2005/051007				✓

Examiner Signature	/Michael Andrews/	Date Considered	06/16/2009
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\*EXAMINER: Initial if reference considered, whether or not citation is in conformance with MPEP 609. Draw line through citation if not in conformance and not considered. Include copy of this form with next communication to applicant. <sup>1</sup> Applicant's unique citation designation number (optional). <sup>2</sup> See Kinds Codes of USPTO Patent Documents at [www.uspto.gov](http://www.uspto.gov) or MPEP 901.04. <sup>3</sup> Enter Office that issued the document, by the two-letter code (WIPO Standard ST.3). <sup>4</sup> For Japanese patent documents, the indication of the year of the reign of the Emperor must precede the serial number of the patent document. <sup>5</sup> Kind of document by the appropriate symbols as indicated on the document under WIPO Standard ST.16 if possible. <sup>6</sup> Applicant is to place a check mark here if English language Translation is attached.

This collection of information is required by 37 CFR 1.97 and 1.98. The information is required to obtain or retain a benefit by the public which is to file (and by the USPTO to process) an application. Confidentiality is governed by 35 U.S.C. 122 and 37 CFR 1.14. This collection is estimated to take 2 hours to complete, including gathering, preparing, and submitting the completed application form to the USPTO. Time will vary depending upon the individual case. Any comments on the amount of time you require to complete this form and/or suggestions for reducing this burden, should be sent to the Chief Information Officer, U.S. Patent and Trademark Office, P.O. Box 1450, Alexandria, VA 22313-1450. DO NOT SEND FEES OR COMPLETED FORMS TO THIS ADDRESS. SEND TO: Commissioner for Patents, P.O. Box 1450, Alexandria, VA 22313-1450.

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ALL REFERENCES CONSIDERED EXCEPT WHERE LINED THROUGH. /M.A./